

## Statement of Basis - Narrative

### NSR Permit

**Type of Permit Action:** Regular-Significant Revision

**Facility:** XTO - Spartan Compressor Station  
**Company:** XTO Energy Inc  
**Permit No(s):** 7681M2  
**Tempo/IDEA ID No.:** 38274 - PRN20210001  
**Permit Writer:** Urshula Bajracharya

### Fee Tracking (not required for Title V)

<b>Tracking</b>	<b>NSR tracking entries completed:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
	<b>NSR tracking page attached to front cover of permit folder:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
	<b>Paid Invoice Attached:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
	<b>Balance Due Invoice Attached:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
	<b>Invoice Comments:</b>	

  

<b>Permit Review</b>	<b>Date to Enforcement:</b> TBD	<b>Date of Enforcement Reply:</b> TBD
	<b>Date to Applicant:</b> TBD	<b>Date of Applicant Reply:</b> TBD
	<b>Date to EPA:</b> N/A	<b>Date of EPA Reply:</b> N/A
	<b>Date to Supervisor:</b> 06/10/2021	

#### **1.0 Plant Process Description:**

The site uses natural gas engines to compress the field gas to 1200-1300 psig. The high-pressure gas is then dehydrated using triethylene glycol dehydration units, each handling up to 80 MMscfd each. The systems are equipped with flash tanks and condensers. Flash tank vapors are recycled in the dehydration system. The glycol still vent vapors are routed to condensers. Dehydrated gas is then transferred to a sales pipeline.

#### **2.0 Description of this Modification:**

This modification consists of removal of two (2) compressor engines and two (2) heaters, and modification of eleven (11) compressor engines, three (3) glycol dehydrators and their respective reboilers, three (3) flares, four (4) condensate tanks, two (2) produced water tanks, two (2) vapor recovery units (VRU), the low pressure separator, the condensate truck loading and start-up, shutdown and maintenance (SSM). The facility is proposing to add two new emissions sources - produced water truck loading and Malfunction emissions.

#### **3.0 Source Determination:**

1. The emission sources evaluated include entire facility.

2. Single Source Analysis:

- A. SIC Code: Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? Yes

- B. Common Ownership or Control: Are the facilities under common ownership or control?  
Yes
- C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? Yes

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes? Yes

**4.0 PSD Applicability:**

- A. The source, as determined in 3.0 above, is a minor source before and after this modification. In Table 102.A of the draft permit it may appear that VOC put the facility into PSD status, but this total includes fugitive emissions and fugitives, per the PSD rule, do not count towards determining PSD status.

**5.0 History (In descending chronological order, showing NSR and TV):** \*The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
7681-M1	02/11/2022 (Signed after Final Order for Hearing)	NSR-Significant Revision	This modification is for removal of two (2) compressor engines and two (2) heaters, and modification of eleven (11) compressor engines, three (3) glycol dehydrator and associated reboilers, three (3) flares, four (4) condensate tanks, two (2) produced water tanks, two (2) vapor recovery units (VRU), low pressure separator, one (1) truck loading and start-up, shutdown and maintenance (SSM). The facility proposing to add two new emissions sources-truck loading and Malfunction emission.
7681-M1	02/7/2019	NSR-Significant Revision	With this revision, XTO plans to increase gas throughput and replace many of the engines previously permitted. Additionally, the dehydration systems will be modified, the VRU and VRT removed, a low-pressure separator (LPS) added, and a Caterpillar 3306 TA (203 hp) added.
*7681	6/13/2018	NSR - New	Initial issuance

**6.0 Public Response/Concerns:** On May 24, 2021 the AQB received comments from WildEarth Guardians, including a request for a public hearing for this permit application.

**7.0 Compliance Testing:** Table as presented by the applicant in Section 17 of the application.

Unit No.	Compliance Test	Test Dates
N/A	No tests performed as of yet	N/A

**8.0 Startup and Shutdown:**

- A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? Yes

- B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? Yes
- C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? Yes
- D. Does the facility have emissions due to routine or predictable startup, shutdown, and maintenance? If so, have all emissions from startup, shutdown, and scheduled maintenance operations been permitted? Yes

**9.0 Compliance and Enforcement Status:**

Request for Verification of compliance was sent to Allan Morris on March 3, 2021. We are still waiting on a response regarding compliance verification as of the date in the footer of this document.

**10.0 Modeling:**

The modeling report from Eric Peters (06/07/2021) states: This modeling analysis demonstrates that operation of the facility described in this report neither causes nor contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NAAQS for CO, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub>; NMAAQs for CO, NO<sub>2</sub>, and SO<sub>2</sub>; and Class I and Class II PSD increments for NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub>.

**11.0 State Regulatory Analysis (NMAC/AQCR):**

<u>STATE REGU- LATIONS</u>  Citation 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Justification:
<b>2.1</b>	General Provisions	Yes	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
<b>2.3</b>	Ambient Air Quality Standards	Yes	Entire Facility	<b>NSR:</b> 20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
<b>2.7</b>	Excess Emissions	Yes	Entire Facility	Applies to all facilities' sources
<b>2.38</b>	Hydrocarbon Storage Facilities	Yes	OT1 – OT4	<u>20.2.38</u> NMAC This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities.

<a href="#">STATE REGU-LATIONS</a> Citation 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Justification:
2.61	Smoke and Visible Emissions	Yes	FL1 – FL3, RB1 – RB3, ENG1 – ENG9, ENG11 – ENG12, HTR1	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).
2.70	Operating Permits	Yes	Entire Facility	The source is a Title V Major Source as defined at 20.2.70.7 NMAC.
2.71	Operating Permit Fees	Yes	Entire Facility	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Yes	Entire Facility	NSR Permits are the applicable requirement, including 20.2.72 NMAC.
2.73	NOI & Emissions Inventory Requirements	Yes	Entire Facility	Applicable to all facilities that require a permit. PER > 10 tpy for a regulated air contaminant.
2.75	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC
2.77	New Source Performance Standards	Yes	See Sources subject to 40 CFR 60	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60.
2.78	Emissions Standards for HAPs	No	See Sources subject to 40 CFR 61	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
2.79	Permits Nonattainment Areas	No		This facility is not located in, nor does it affect, a nonattainment area. Link to <a href="#">Non-attainment Link</a> areas
2.82	MACT Standards for Source Categories of HAPs	Yes	See sources subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

#### 12.0 Federal Regulatory Analysis:

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Yes	Entire Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
NSPS Subpart A (40 CFR 60)	General Provisions	Yes	See sources subject to a Subpart	Applies if any other subpart applies.

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
			in 40 CFR 60	
40 CFR Part 60 Subpart JJJJ (Quad-J)	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	Yes	ENG1 – ENG6, ENG7 – ENG9 (TBD), ENG11 – ENG12	The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of section 60.4230. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. <a href="#">Link to regulation – read more</a>
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	FUG, Compressors for ENG1 – ENG9, ENG11 – ENG12.	The storage tanks were constructed after the applicability date of the rule; however, XTO is requesting emissions be limited to less than 6 tpy through enforceable requirements and control mechanisms. The regulation for storage vessels does take into consideration PTE which includes control equipment. The site uses low-bleed pneumatic controllers, hence these will not be subject. The facility is subject to leak monitoring from fugitive components. The compressors for the engines are subject.
NESHAP Subpart A (40 CFR 61)	General Provisions	No	See sources subject to a Subpart in 40 CFR 61	Applies if any other subpart applies.
MACT Subpart A (40 CFR 63)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 63	Applies if any other subpart applies.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities –	Yes	DEHY1 – DEHY3	In accordance with the definition of a major source as defined in 40 CFR 63.761, this facility is Subject to the requirements of 40 CFR 63 Subpart HH Facility was major for HAPS after June 17,

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				2002.
40 CFR 63 Subpart ZZZZ (Quad Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	ENG1 – ENG6, ENG7 – ENG9 (TBD), ENG11 – ENG12	See 63.6580 and EPA Region 1's Reciprocating Internal Combustion Guidance website.  A facility is subject to this subpart if they own or operate a stationary RICE at a major source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

**13.0 Exempt and/or Insignificant Equipment that do not require monitoring:**

**Table below is as presented in the application, Section 2, Table 2-B.**

Unit Number	Source Description	Make	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction <sup>2</sup>
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1. a)	Date of Installation /Construction <sup>2</sup>
ROAD	Haul Road Emissions	N/A	N/A	N/A	20.2.72.202.B.5	N/A
			N/A	N/A	20.2.72.202.B.5	N/A

**14.0 New/Modified/Unique Conditions (Format: Condition#: Explanation):**

- A. New: Condition A107.D Malfunction Emissions; because facility requested Malfunction emissions.
- B. New: Condition A107.E Dehy SSM; because facility requested SSM for Dehy.
- C. New: Condition A107.F SSM Flare; because facility requested SSM for flares.
- D. Modified: Condition A110.A Fuel and Fuel Sulfur Requirement was updated to current language and changed the requirement from 5 grain/100 dry cubic feet to 3.8 grain/100 dry cubic feet after back calculation discovered an error.
- E. New: Condition A201.D 40 CFR 60, Subpart JJJJ for potentially subject units; because some units are not installed.
- F. New: Condition A201.F 40 CFR 63, Subpart ZZZZ for potentially subject units; because some units are not installed.
- G. New: Condition A202.E Flares (Units FL1, FL2, FL3): Control Device for BTEX Condensers (COND1-COND3)
- H. Modified: Condition A203.A Condensate Tank Throughput to the most current language.
- I. Modified: Condition A203.E Flares (Units FL1 – FL3): Control Device for Condensate Tanks (Units OT1 – OT4), Produced Water Tanks (Units WT1 – WT2), and Skim Tanks (Units SKT1 – SKT2; Removed LPS from the condition since LPS is covered under condition A203.F.
- J. New: Condition A203.F Low Pressure Separator (LPS) and Control Devices (Vapor Recovery Units (Units VRU1 and VRU2) and Flares (Units FL1 – FL3)) because LPS is routed to the tanks

- K. New: Condition 206.B Flare Gas Flow Monitoring and Gas Analysis; standard condition for flares.
- L. Modified: Condition 206.C Flare Emissions Calculation; older permit condition was updated.
- M. Moved: Condition 209.A 40 CFR 60, Subpart OOOOa – Reciprocating Compressors was moved to this location under fugitives (was formerly condition A202.G).
- N. Modified: Condition 209.B 40 CFR 60, Subpart OOOOa – Fugitives (Unit FUG); the condition was modified to have the appropriate citation for compressor station.

**15.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.**

- A. Removed condition A201.A Notification of Catalysts Installation from the permit since all engines are required to have Catalysts.
- B. The facility will be subject to Compliance Assurance Monitoring (CAM) because the TEG dehydrators, low pressure separator and condensate tanks have uncontrolled emissions greater than 100 tpy. CAM requirements and CAM plan will be implemented during the Title V permitting process. The engines (ENG1-ENG9) will not be subject to CAM because these units have standards under NSPS JJJJ.